

AMENDMENTS TO THE SPECIFICATION

Please amend the Abstract of the disclosure as follows:

An optical fiber, which has a zero-material dispersion wavelength equal to or greater than $2\text{ }\mu\text{m}$, and a high nonlinear susceptibility χ^3 equal to or greater than 1×10^{-12} esu, and uses tellurite glass having sufficient thermal stability for processing into a low-loss fiber, employs a PCF structure or HF structure having strong confinement into a core region. This enables light to propagate at a low loss. The size and geometry of air holes formed in the core region, and the spacing between adjacent air holes make it possible to control the zero dispersion wavelength within an optical telecommunication window ($1.2\text{--}1.7\text{ }\mu\text{m}$), and to achieve large nonlinearity with a nonlinear coefficient γ equal to or greater than $500\text{ W}^{-1}\text{ km}^{-1}$: A fabrication method of an optical fiber using as a core material tellurite glass. The method includes a first process of molding a tellurite glass melt into a mold, the mold having a plurality of convex portions defining an inner wall, which portions run parallel to each other in a longitudinal direction in order to make a polygon columnar glass preform, and a second process of inserting the glass preform into a cylindrical jacket tube made of tellurite glass and carrying out fiber-drawing under pressure so as to maintain or enlarge air holes which are gaps generated between the glass preform and the jacket tube.